

**WHAT IS CLAIMED IS:**

1. A system for graphically displaying interaction data between items in a retail setting, for various retailing-related activities, the system comprising:

a general purpose computer having memory capable of operating pursuant to instructions comprising an algorithm, wherein the algorithm further comprises the steps of:

loading the interaction metric between items into memory;

optimizing placement of nodes and edges pursuant to the interaction metric;

and

generating a graphical representation of the nodes and edges with corresponding interaction metrics.

2. The system for graphically displaying and optimizing interaction data according to Claim 1; wherein the interaction metric is a conditional probability.

3. The system for graphically displaying and optimizing interaction data according to Claim 1; wherein the interaction metric is based on correlations between items.

4. The system for graphically displaying and optimizing interaction data according to Claim 1; wherein the interaction metric comprises at least one of a cross-elasticity and cross-correlation between two different variables.

5. The system for graphically displaying and optimizing interaction data according to Claim 1; wherein the optimum placement of nodes and edges adheres to at least one of minimizing number of crossings between edges, distance between linked nodes is minimized, graph area is minimized, horizontal and vertical symmetries are maximized, and an angle between two edges onto a node is greater than or equal to a predetermined constant.

6. The system for graphically displaying and optimizing interaction data according to Claim 1, wherein if the interaction metric is below a predetermined threshold the interaction between at least one of the below-threshold item and an edge is not graphically displayed.

7. The system for graphically displaying and optimizing interaction data according to Claim 2, wherein if the interaction metric is below a predetermined threshold the interaction between at least one of the below-threshold item and an edge is not graphically displayed.

8. The system for graphically displaying and optimizing interaction data according to Claim 4, wherein if the interaction metric is below a predetermined threshold the interaction between at least one of the below-threshold item and an edge is not graphically displayed.

9. The system for graphically displaying and optimizing interaction data according to Claim 5, wherein if the interaction metric is below a predetermined threshold the interaction between at least one of the below-threshold item and an edge is not graphically displayed.

10. The system for graphically displaying and optimizing interaction data according to Claim 2; wherein the optimum placement of nodes and edges adheres to at least one of minimizing number of crossings between edges, distance between linked nodes is minimized, graph area is minimized, horizontal and vertical symmetries are maximized, and an angle between two edges onto a node is greater than or equal to a predetermined constant.

11. The system for graphically displaying and optimizing interaction data according to Claim 2; wherein the optimum placement of nodes and edges adheres to at least one of minimizing number of crossings between edges, distance between linked nodes is minimized, graph area is minimized, horizontal and vertical

symmetries are maximized, and an angle between two edges onto a node is greater than or equal to a predetermined constant.

12. A system for graphically displaying and optimizing interaction data between items in a retail setting, the system comprising:

a general purpose computer having memory capable of operating pursuant to instructions from an algorithm, wherein the algorithm further comprises the steps of:

means for loading the interaction metric between items into memory;

means for optimizing placement of nodes and edges pursuant to the interaction metric; and

means for generating a graphical representation of the nodes and edges with corresponding interaction metrics.

13. A system for graphically displaying and optimizing interaction data between items in a retail setting, the system comprising:

a general purpose computer having memory capable of operating pursuant to instructions from an algorithm, wherein the algorithm further comprises the steps of:

accessing and operating on interaction correlations calculated between items for sale;

optimizing placement of nodes and edges pursuant to the interaction correlations, wherein crossings between one or more edges is minimized and the distance between linked nodes is minimized; and

generating a graph of the nodes and edges, wherein the corresponding interaction correlations are associated with each node and edge.

14. A method for graphically illustrating correlations between items offered for sale, the method comprising:

importing interaction metrics between items into a memory device;

optimizing placement of nodes and edges pursuant to the interaction metrics; and

generating a graphical representation of the nodes and edges with corresponding interaction metrics.

15. The method for graphically illustrating correlations between items according to Claim 14; wherein the interaction metric is a conditional probability.

16. The method for graphically illustrating correlations between items according to Claim 14; wherein the interaction metrics comprise at least one of a cross-elasticity and cross-correlation between two different variables.

17. The method for graphically illustrating correlations between items according to Claim 14; wherein the optimum placement of nodes and edges adheres to at least one of minimizing number of crossings between edges, distance between linked nodes is minimized, graph area is minimized, horizontal and vertical symmetries are maximized, and an angle between two edges onto a node is greater than or equal to a predetermined constant.